

REMARKS

The Office Action dated October 11, 2006 has been received and carefully noted. The above amendments to the specification and claims, and the following remarks, are submitted as a full and complete response thereto.

The specification is amended to overcome an objection to the drawings. Claims 1, 16, and 17 are amended to more particularly point out and distinctly claim the subject matter of the present invention. New claims 18 and 19 are added. No new matter is added. Claims 1-19 are respectfully submitted for consideration.

The Office Action objected to the drawings because they contain a reference number that is not mentioned in the specification. Applicants respectfully submit that the reference "4" corresponds to a cell as shown in Fig. 2. Accordingly, the specification is amended where appropriate to add the reference number "4" after the word "cell". Withdrawal of the objection to the drawings is respectfully requested.

The Office Action rejected claims 1-17 under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,452,541 to Zhao et al. (Zhao). Applicants respectfully submit that Zhao fails to disclose or suggest all of the features recited in any of the pending claims.

Claim 1, from which claims 2-15 depend, is directed to a method of providing information regarding the location of a mobile user. A likely location of the mobile user equipment relative to a station is determined. An estimate of the delay between transmission of a signal from the station and reception of the signal at the mobile user

equipment is determined based on the determined likely location. Assistance data from the station is signaled to the mobile user equipment comprising information about the timing of the positioning system. Obtaining a more accurate location determination at the user equipment based on signals from the entities of the positioning system, the assistance data and the estimated delay. The location is determined based on information signaled from entities of a positioning system and assistance data signaled from the station of the communication system.

Claim 16 is directed to a system for determining the location of a mobile user equipment. A positioning system includes entities arranged to signal information, the arrangement being such that the mobile user equipment may receive and use the information from the entities when determining its location. A station of a communication system arranged to transmit information signals to the mobile user equipment. A location estimation unit is configured to provide an estimate of the likely location of the mobile user equipment relative the station. A processor unit is configured to provide an estimate of the delay between transmission of an information signal from the station and reception of the information signal at the mobile user equipment based on the estimated location. A location determination unit is configured to determine the location of the mobile user equipment based on signals from the entities of the position system, assistance data from the station, the assistance data comprising information about the timing of the positioning system and the estimate of the delay.

Claim 17 is directed to a mobile user equipment. A first receiver is configured to receive information signals from entities of a positioning system for use in location determinations by the mobile user equipment. A second receiver is configured to receive signals from a station of a communication system. A location determination unit is configured to determine the location of the mobile user equipment based on signals from the entities of the position system, assistance data signal received from the station. The assistance data includes information about the timing of the positioning system. A computed difference between the time of transmission of the assistance data signal from the station and the time of reception of said assistance data signal at the mobile user equipment, is based on an estimated likely location of the mobile user equipment relative to the base station.

Applicants respectfully submit that each of the pending claims recite features that are neither disclosed nor suggested in Zhao.

Zhao is directed to a network assisted satellite positioning system based location scheme (see col. 1, lines 62 to 65 of Zhao). Zhao also describes transmitting assistance messages via a network to mobile receivers and discloses transmitting the assistance messages with a GPS time. The problem of a delay occurring between the time the GPS time is applied to the assistance message and the time the assistance message is received at the mobile receiver is disclosed and it is disclosed that this delay will be variable according to the location of the mobile receiver. According to Zhao, a communication network periodically determines a roundtrip delay between a base station and a mobile

station and this can be used to determine the delay incurred by the assistance messages, and used to compensate for the time required to propagate the assistance message to the mobile receiver for example, by adding the delay to the GPS time stamped onto the assistance message (see, for example, column 2, lines 10 to 58 and column 4, lines 19 to 24 of Zhao).

Applicants respectfully submit that Zhao fails to disclose or suggest at least the features of determining a likely location of the mobile user equipment relative to a station, and determining an estimate of a delay between transmission of a signal from the station and reception of said signal at the mobile user equipment based on the determined likely location, as recited in claim 1 and similarly recited in claims 16 and 17. More specifically, the above claims recite that the determined likely location of the mobile user equipment is used to estimate a delay between transmission of the signal from the station and reception of the signal. Zhao merely discloses estimating the delay using a roundtrip delay technique, which is different from using a determined likely location. See Zhao at column 2 lines 30-36 and lines 49-58.

As discussed in the present specification at least on page 9 lines 15-26, in prior systems such as Zhao, the timing advance (an example of round trip delay) can be used to provide an estimate for the time delay when the mobile station has an active connection. However in system such as that described in Zhao, another estimate of the delay is required, e.g. when the mobile station does not have an active connection (the mobile station is, for example, in idle state) or when it is not otherwise provided with the timing

advance value. As discussed in the specification, in light of this problem, embodiments of the present invention provide an alternative approach in which the delay is estimated based on a determined likely location of the mobile user equipment relative to the station.

Applicants respectfully submit that because claims 2-15 depend from claim 1, these claims are allowable at least for the same reasons as claim 1, as well as for the additional features recited in these dependent claims.

Based at least on the above, Applicants respectfully submit that claims 1-17 recite features that are neither disclosed nor suggested in Zhao. Accordingly, withdrawal of the rejection under 35 U.S.C. 102(e) of claims 1-17 is respectfully requested.

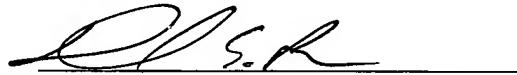
As discussed above, new claims 18 and 19 are added. Applicants respectfully submit that claims 18 and 19 recite features that are neither disclosed nor suggested in any of the cited references.

Applicants respectfully request that each of claims 1-19 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Additional Claim Fee Transmittal
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